

Notice of Allowability

Application No.

09/749,178

Examiner

Brian D. Nguyen

Applicant(s)

KRISHNAMURTHY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 3/7/05.
2. ☒ The allowed claim(s) is/are 1-4, 8, 5-7, and 9-28 (renumbered 1-28, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 10052005.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

BRIAN NGUYEN

PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with R. Alan Burnett on 10/5/05.
3. The application has been amended as follows:

Claim 1: A method for diagnosing a failure in a network switching device comprising:
receiving a data packet containing a debug information element (IE) at the network switching device;
extracting the debug IE from the data packet;
performing at least one diagnostic function on the network switching device in response to information contained in the debug IE, wherein the debug IE is formatted so as to be propagated transparently across network switching devices that are not configured to recognize the debug IE.

Claim 9: A method for diagnosing a failure in a connection path comprising a plurality of nodes in a communication network, comprising:
embedding a debug information element (IE) in a data packet;
propagating the data packet to a plurality of switching devices corresponding to respective nodes along the connection path;

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extracting the debug IE at selected switching devices among said plurality of switching devices; and

performing at least one failure diagnostic function on targeted switching devices among said selected switching devices in response to information contained in the debug IE, wherein the debug IE is formatted so as to be propagated transparently across network switching devices that are not configured to recognize the debug IE.

Claim 16: The method of Claim 9, further comprising communicating results of said at least one failure ~~analysis~~ diagnostic function from the targeted switching devices to an operator of the targeted switching devices or the communication network.

Claim 17: The method of Claim 16, wherein the results from said at least one failure ~~analysis~~ diagnostic function are communicated to the operator of said targeted switching devices by passing the results to a data station.

Claim 23: The method of Claim 9, further comprising:

identifying said plurality of switching devices comprising the connection path;

identifying a switching device along the connection path corresponding to a failure point in the connection path;

forwarding the ~~message~~ data packet from switching device to switching device along the connection path until it reaches the switching device corresponding to the failure point; and

encoding the debug IE so as to instruct the switching device corresponding to the failure point to perform at least one failure diagnostic functions to identify why the switching device failed.

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Claim 24: An article of manufacture comprising a computer-readable medium having computer-executable instructions for performing the functions of:

receiving a data packet containing a debug information element (IE);

extracting the debug IE from the data packet;

performing at least one diagnostic function on a network switching device in response to information contained in the debug IE, wherein the debug IE is formatted so as to be propagated transparently across network switching devices that are not configured to recognize the debug IE.

Claim 26: An article of manufacture comprising a computer-readable medium having computer-executable instructions for performing the functions of:

generating a debug information element (IE) having a format so that it ~~may be~~ is propagated transparently across a network of switching devices that are not configured to recognize the debug IE;

embedding the debug IE in a message; and

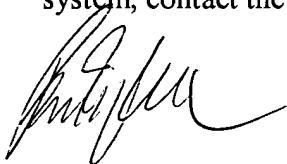
receiving results of at least one failure diagnostic function from a network switching device configured to respond to the debug IE.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



10/5/05

BRIAN NGUYEN
PRIMARY EXAMINER